

In accordance with articles of manufacture consistent with the present invention, a computer-readable memory device encoded with a data structure with entries that are accessed by a program which is encoded on the memory device and which is run by a processor in a system is provided. Each entry comprises: a first storage area that stores a resource identifier; and a plurality of second storage areas that each store one of a plurality of resource data corresponding to the resource identifier, each resource data associated with at least one user environment of a session object, wherein the program determines a suitable resource data to be used by using the resource identifier and an indication of a current user environment in which the program is running.

In accordance with methods consistent with the present invention, a method in a data processing system for providing resources adapted to at least one of a plurality of user environments is provided. The method comprises the steps of: initiating execution of a program, the program having an application object and a resource identifier that is associated with a plurality of resource data stored in the application object; and while the program is executing, determining from the application object which of the plurality of user environments the program is executing in; and identifying which of the resource data is suitable for the determined user environment by using both the resource identifier and the determined user environment.

In accordance with methods consistent with the present invention, a method in a data processing system for providing resources adapted to at least one of a plurality of user environments is provided. The method comprises the steps of: initiating execution of a program, the program having an application object and a resource identifier that is associated with a plurality of resource data stored in the application object; and while the program is executing, determining from the application object which of the plurality of user environments the program is executing in; loading a lookup object for linking the resource identifier with a resource data suitable for the determined user environment; and obtaining the suitable resource data from the lookup object by using the resource identifier and the determined user environment.

In accordance with articles of manufacture consistent with the present invention, a computer-readable medium is provided. The computer-readable medium contains instructions that cause a data processing system to perform a method for providing resources adapted to at least one of a plurality of user environments. The method comprises the steps of: initiating execution of a program, the program having an application object and a resource identifier that is associated with a plurality of resource data stored in the application object; and while the program is executing, determining from the application object which of the plurality of user environments the program is executing in; and identifying which of the resource data is suitable for the determined user environment by using both the resource identifier and the determined user environment.

In accordance with articles of manufacture consistent with the present invention, a computer-readable medium is provided. The computer-readable medium contains instructions that cause a data processing system to perform a method for providing resources adapted to at least one of a plurality of user environments, the method comprising the steps of: initiating execution of a program, the program having an application object and a resource identifier that is associated with a plurality of resource data stored in the application object; and while the program is executing, determining from the application object which of the plurality of user environments the program is executing in; loading a lookup object for linking the resource identifier with a resource data suitable for the determined user environment; and obtaining the suitable resource data from the lookup object by using the resource identifier and the determined user environment.

In accordance with systems consistent with the present invention, a data processing system for providing resources adapted to at least one of a plurality of user environments is provided. The data processing system comprises: a memory comprising a program having an application object and a resource identifier that is associated with a plurality of resource data stored in the application object, the program determining from the application object which of a plurality of user environments the program is executing in, and identifying which of the resource data is suitable for the determined user environment by using both the resource

identifier and the determined user environment; and a processing unit that runs the program.

In accordance with systems consistent with the present invention, a data processing system for providing resources adapted to at least one of a plurality of user environments is provided. The data processing system comprises: means for initiating execution of a program, the program having an application object and a resource identifier that is associated with a plurality of resource data stored in the application object; and means for, while the program is executing, determining from the application object which of the plurality of user environments the program is executing in, and identifying which of the resource data is suitable for the determined user environment by using both the resource identifier and the determined user environment.

In accordance with articles of manufacture consistent with the present invention, a computer-readable memory device encoded with a data structure with entries that are accessed by a program which is encoded on the memory device and which is run by a processor in a system is provided. Each entry comprises: a first storage area that stores a resource identifier; and a plurality of second storage areas that each store one of a plurality of resource data corresponding to the resource identifier, each resource data associated with at least one user environment of an application object, wherein the program determines a suitable resource data to be used by using the resource identifier and an indication of a current user environment in which the program is running.

The above-mentioned and other features, utilities, and advantages of the invention will become apparent from the following detailed description of the invention together with the accompanying drawings.

Other systems, methods, features, and advantages of the invention will become apparent to one with skill in the art upon examination of the following figures and detailed description. It is intended that all such additional systems, methods, features, and advantages be included within this description, be within the scope of the invention, and be protected by the accompanying drawings.

#### BRIEF DESCRIPTION OF THE DRAWINGS